# TÜRKİYE'S NEED FOR FIGHTER JETS AND THEIR PROCUREMENT

MURAT ASLAN

- How is the needs analysis carried out for procuring fighter jets?
- What are Turkiye's needs and plans for modernizing its fighter jets?
- What is the current status of fighter jet procurement, including existing purchases and domestic production?

With the news of Turkiye's Eurofighter procurement making headlines, curiosity has grown about the Turkish Air Force's need for fighter jets. As Turkiye's current fleet approaches the end of its service life, a comprehensive renewal, both in terms of quantity and quality, is necessary and widely recognized. However, to inform the public effectively, it would be beneficial to analyze the rationale behind the fighter jet requirements, examine the ongoing procurement process, and consider alternatives. There needs to be an assessment covering a broad spectrum of Turkish warfighter procurement and production, including Eurofighters.[1]

1 This perspective was prepared in response to news reports regarding the purchase of EUROFIGHTERs.
Christina Gallardo, "Turkey Nears Preliminary Deal for Eurofighter Combat Jet Order, Sources Say", WSJ, https://www.wsj.com/business/turkey-nears-preliminary-deal-for-eurofighter-combat-jet-order-sources-say-8cb2e959, accessed on 22 July 2025.

## NEEDS ANALYSIS FOR THE SUPPLY OF COMBAT AIRCRAFT

Specific criteria act as essential references in the needs analysis of every country's air force. Despite numerous variables, these criteria can be summarized as follows:

- Analysis of the security environment and threat assessment based on the political situation or ongoing tensions.
- Threats, potential threats, or risks that will be addressed either collectively or separately, including the air, air defense, and space capabilities of these states and/or non-state actors.
- The geographical areas where operations are likely to be conducted, along with the altitude and range depth achievable within the threat's capabilities.

**MURAT ASLAN**

He graduated from War College in the field of Management in 1991. He assumed varying tasks and appointments in the Turkish Armed Forces (TAF). He graduated from Master's (2010) and PhD programs (2017) in the International Relations Department of the Middle Eastern Technical University. He scrutinized the Chinese soft power practices through cultural diffusion efforts and African policy for a Master's degree. His Ph. D. research was about intelligence and propaganda efforts in peace-oriented undertakings based on the UN and NATO practices in Bosnia and Afghanistan. His studies are primarily on the security and defence studies, the conceptualization of power, intelligence and propaganda practices. He had been commissioned to Iraq, Afghanistan, and Bosnia, facilitating the comparison of theory and practice when he was in Service. The primary region he has been interested in is the Middle East; he had monitored wider Afghanistan, Balkans, the USA, and China as the secondary academic effort. He was a faculty member of the Istanbul Sabahattin Zaim University of Turkey after teaching as a visiting scholar at Başkent University. He is currently a faculty member at Hasan Kalyoncu University and a Researcher in SETA Foundation. Aslan is the author of the boks - Security Sector Reform for Libya: A Cruical Step Towards State Building, The Crisis of the Hundred Years: Afghanistan, Intelligence and Propaganda: The Cases of Bosnia and Herzegovina and Afghanistan, other than academic and scholarly articles.

- Meteorological events that might be encountered in the likely areas where the mission will be conducted.
- Envisioning potential conflict scenarios and the features they require,
- Analysis of the combat roles that Turkiye's and the opposing force's air, air defense, and space forces may perform within the scenarios and the tasks derived from these roles.
- Complementary and supportive systems suitable for the expected missions and the characteristics required by these systems.
- The ammunition capability that must be possessed and its integration with air assets
- Measures (cyber, electronic warfare, deception, etc.) for the force protection needs of Turkish air, air defense, and space assets.
- Innovations generated by technologies that could serve as force multipliers,
- Force multipliers that unmanned platforms can generate.[2]

## REASONS DRIVING TURKEY TO MODERNIZE ITS WARPLANE FLEET

When analyzing the regions that form Turkiye's primary and secondary circles of interest in its immediate geography, along with global developments, it is evident that a gap exists between the air, air defense, and space capabilities of various state actors.[3] Countries within Turkiye's first and second circles of interest that lack air power could, intentionally or unintentionally, be a haven or pose asymmetric threats, such as through terrorist groups. However, there are challenging states in the region, which have air, air defense, and space capabilities that enable them to engage in rhetoric and actions targeting Turkiye's interests.[4] Therefore, Turkiye, which pursues a policy of "self-help," must acquire sufficient air, air defense, and space capabilities of the right quality and quantity to counter two threats that enjoy external support.

As shown by the examples of Iran and Syria, in the new security and conflict environment, states that cannot establish "air superiority and sea control" with their air and air defense capabilities lose the initiative and become a 'subject' rather than influencing the course of the conflict. Therefore, Turkiye must be capable of repelling attacks from any potential adversary, including those with stealth technology, and be able to shift the conflict to the aggressor's territory. In this context, it is expected that Turkiye will establish complete national control in all areas, from procurement to operational use, against states with air, air defense, and space capabilities in any tense situation. In other words, a force structure capable of making independent decisions and conducting operations under constraints related to supply chains and operational needs must be developed. Turkiye must be able to carry out self-defense, deterrence, and punishment duties without requiring permission, support, or restrictions from other countries in terms of air, air defense, and space procurements.

## THE QUALITIES TURKEY NEEDS IN A FIGHTER JET

Turkiye's warfighters will fly over:

- The Middle East, with its hot, dusty, and complex desert climate.
- The Black Sea, with its flat landscape and cold, strong air currents.

2 These criteria are concluded by the author. Criteria appropriate to the specific conditions of each state can be doctrinated.

3 During the tensions between Iran and Israel in 2025, Iran's weaknesses in its air and air defense capabilities were exploited by the Israeli army. Israel's air defense systems were also inadequate against Iran's hypersonic missiles. For this reason, both countries are seeking new solutions for their air and air defense forces.
Amir Daftari, "Iran's Army Repairs Air Defenses for New War," Newsweek, July 21, 2025, https://www.newsweek.com/iran-air-defence-restored-war-nuclear-talks-europe-2101563 accessed on July 22, 2025.

4 Paul Antonopoulos, "Greece and Israel object to Turkey receiving F-35 and Eurofighter – Behind-the-scenes consultations and Ankara's pressure on Berlin", Greek City Times, 30 April 2025, https://greekcitytimes.com/2025/04/30/greece-and-israel-object-to-turkey/, accessed on 22 July 2025.

| Table-1 Comparison of the Turkish, Israeli, and Greek Air Forces | | | |
|---|---|---|---|
| | Turkiye | Israel | Greece |
| Air to Air Combat (Air Superiority) | Eurofighter Typhoon (40 planned) | F-15I (~25) | F-16C/D Block 52+ Advanced |
| Multi role | F-16C/D Block 30/40/50+ (~235)<br>F-16V modernization continues<br>KAAN (MMU – 2028+) | F-16C/D Block 30/40/50 (~300)<br>F-35I (50+ being procured, ~36 in service) | F-16C/D Block 30/50/52+ (~150)<br>F-16V modernization started |
| Strike Aircrafts | F-4E 2020 Terminator (~30) | F-15I and F-35 | F-16 (multi role) |
| Light Attack / CAS | Hürkuş-C (under test)<br>ANKA<br>ANKA-3 (Under test)<br>AKSUNGUR<br>TB 2/3, Kızılelma (Under test) | Helicopters and UAVs for CAS r | No CAS capacity, F-16 |
| Training / Armable Training Aircraft | T-38M Talon<br>Hürjet (R&D, in service in 2025) | M-346 Lavi (for jet training) | T-2 Buckeye<br>M-346 (procured @2020) |
| 5th Generation | N/A (F-35?)<br>KAAN (2028+) | F-35I Adir (36+ in service, in total 50+) | N/A (F-35 @procurement phase) |

- The Mediterranean, with its humid climate conducive to naval battles and limited visibility.
- The Balkans, with its mountainous, forested, unstable terrain, humidity, and wind.
- The second zone of interest, which includes expected challenges, involves uncertain geographical areas and meteorological events. Therefore, the Air Force must be adaptable to different terrain types for the target development process and changing weather conditions. Hence, there must be a variety of aircraft with differing features.

It is expected that Turkish fighter jets will be equipped with advanced technology, not face supply issues during tensions, and be capable of fighting on two fronts at once. Additionally, modern conflicts often show a mix of different characteristics, such as traditional or non-traditional, symmetrical or asymmetrical, regular or irregular, and hybrid. Therefore, the modernization of Turkish fighter jets should be part of a program that includes both external procurement and domestic production. Since a fighter jet is a 'system' composed of various subsystems, modernization efforts need to be overseen by a 'super system' that is multifaceted, complementary, and capable of integrating with ground systems and other aircraft.

When examining current projects, it is clear that Turkish fighter jets are also equipped with navigation, target detection, and intelligence sensors. These systems were supplied by other countries and fitted with new technology until recent innovations by Turkish defense companies. In this context, the Özgür project has been a significant turning point, and the F-16 Block 30s have been modernized.[5] With national capabilities, radar, electro-optical systems, pods, and other supporting systems produced by Turkish defense industry companies provide cost-effective solutions.

The integration of national ammunition systems has also enhanced uniqueness and expanded the capability to achieve a long-range "stand-off" effect.[6] However, due to the age of Turkish fighter jets and the costs of modernization, Turkiye needs to pursue a rational, needs-based fighter jet procurement plan. Such a plan also requires developing national systems and solutions for the transition period.

5 Göksel Yıldırım, ""ÖZGÜR"leştirilen ilk F-16'lar Hava Kuvvetlerine teslim edildi", AA, 18 May 2023, https://www.aa.com.tr/tr/savunma-sanayisi/ozgurlestirilen-ilk-f-16lar-hava-kuvvetlerine-teslim-edildi/2900369, accessed on 22 July 2025.

6 A detailed list of new generation ammunition, altering the 'imported ones, can be reviewed through the link:
Milli Savunma, https://www.millisavunma.com/savunma-sanayi/proje-ve-urunler/muhimmatlar/, accessed on 22 July 2025.

At this point, it would be helpful to compare Turkiye with Israel and Greece, with which it has experienced tensions in its immediate neighborhood (Table 1).

There is still an urgent need for fighter jets capable of establishing air superiority. Therefore, Turkiye must acquire Eurofighters or, if that is not feasible, purchase 40-50 similar fighter jets. While there is a balance in terms of the number and quality of multi-purpose fighter jets, Turkiye should aim for an inventory of approximately 500 fighters in the event of a two-front air war. Alongside the F-16 Vipers to be obtained from the US, exploring additional options should also be considered. UAVs can conduct attack and close air support missions, so procurement of more fighters can be delayed, or these missions can be delegated to other multi-purpose aircraft.

Additionally, efforts to enhance political initiatives for acquiring and developing fifth-generation aircraft or accelerating the KAAN program can be pursued. It is also crucial to consider these fighter jets as part of a comprehensive air defense system. Specifically, integrating MURAD 100-A type radars into Turkish fighter jets, along with the development of new radar types, has become a necessity.

## REASONS FOR TURKEY'S PROCUREMENT OF FOREIGN-MADE COMBAT AIRCRAFT

The fighter jet that Turkiye needs must be capable of reaching high altitudes, covering long ranges, and performing aerial maneuvers during flight. Turkish fighter jets should provide maneuverability and firepower superiority while maintaining a low radar cross-section in air-to-air missions. They also need to engage targets at long distances and return safely to base. Therefore, Turkish fighter jets typically incorporate advanced technology and sophisticated software to achieve long-range, high-altitude, superior maneuverability, and effective firing capabilities. This requirement, currently met by F-16s, can be fulfilled through modernizing older-generation F-16s.

Considering that the F-16s Turkiye has been acquiring since 1986 have now reached the end of their service life, Turkiye's efforts to purchase new F-16s and Eurofighters, along with modernization kits for its existing F-16s, are currently a topic of significant interest. MSB Güler announced during the 2025 budget discussions that 40 F-15 Block 70 Viper aircraft would be purchased, but the procurement of 79 modernization kits had been abandoned.[7] Nevertheless, the Özgür Project has achieved its desired results, and the aircraft engines produced by Turkish Engine Industries (TEI) are about to complete the R&D phase and start the serial production phase.[8] Therefore, modernization will be carried out using national resources. On the other hand, due to the positive momentum gained with the US, Turkiye's re-inclusion in the F-35 program during the transition period will both increase deterrence and strengthen the alliance system in which Turkiye is involved. While F-16s perform multi-role missions, Eurofighters are planned to reach an altitude of approximately 65,000 feet and provide air superiority. The signature of British and Turkish Defense Ministers on 23 July 2025 has paved the way for the Eurofighter procurement to fill the gap of air superiority tasks.

Through these external supplies, which are essential for the execution of air-to-air and air-to-ground missions:

- It will be possible to respond to security threats and potential dangers until domestic fighter jets are operational.
- The Turkish defense industry will be able to focus adequately on R&D efforts even during the production stage of domestic fighter jets.
- Resolving issues related to the F-35 and delivering these aircraft, for which payment has already been made, will help achieve regional balance.

7 Yusuf Emir Işık, "F-16 Block 70 tedarikinde son durum", Defense Türk, 26 November 2024, https://www.defenceturk.net/f-16-block-70-tedarikinde-son-durum, accessed on 22 July 2025.

8 For details, visit https://www.tei.com.tr/urunler/tf35000-turbofan-motoru, accessed on 22 July 2025.

- Air superiority can be secured for both Turkiye and NATO on the southeastern flank.

Undoubtedly, these procurement processes are crucial for responding promptly to developments in the first and second circles of areas of interest, where tensions and conflicts are common. Due to anti-Turkiye rhetoric voiced within the US and the EU, the procurement of warplanes that rely on external supply has been approached with caution.

## SCOPE OF TURKEY'S NATIONAL COMBAT AIRCRAFT PROGRAM

Turkiye's fighter jet production program originated out of necessity. Initially created to save money on pilot training and to acquire aviation technology through "accessible and feasible" aircraft, the program was quickly diversified and expanded due to covert embargoes. With the aviation revolution in Turkiye driven by TUSAŞ's ANKA UAVs and ATAK attack helicopters, Hürkuş was upgraded to Hürjet. Later, efforts increased to develop the Hürjet into a combat aircraft in response to possible American restrictions on F-16 procurement. As a result, steps were rapidly taken to produce a combat aircraft, inspired by training aircraft. The experience gained from the Hürjet, which outperforms its peers in maneuverability and durability, also inspired the KAAN aircraft.[9]

In addition to being a fifth-generation aircraft, KAAN is gaining sixth-generation capabilities through the integration and software development of ANKA-3 and will serve as an alternative to F-35s starting in 2028.[10] With its low cost and advanced technology, KAAN will function as both an air and intelligence platform, capable of executing integrated and standalone missions alongside wing-mounted and AI-supported UAVs. Complementing Turkiye's strong national air defense systems, KAAN will also enhance the Iron Dome. These aircraft will be integrated with other systems using national software to create a network-based air and missile defense architecture. However, the development of air defense systems, particularly radar technology to detect fifth-generation aircraft, has become a critical operational need alongside KAANs.

## CONCLUSION

Turkiye is on the verge of reaching a significant milestone in fighter jet procurement. In modern conflicts, having a self-sufficient aviation industry that doesn't rely on foreign nations has become a crucial component of national defense. This was clearly evident during the Iran-Israel conflict. Therefore, it is now essential for Turkiye to achieve air superiority when needed to defend its interests in conflicts within its first and second spheres of influence. The conflicts in Libya in 2019, which culminated with Turkiye's intervention in 2020, have highlighted the need to be prepared for long-range and high-altitude missions. Otherwise, Turkiye risks remaining subordinate to other countries.

To oppose the competing countries in the regional power struggle, Turkiye may plan to take the following actions:

- Initially, the goal is to upgrade the fighter jets in the current air force stock, but this modernization should extend beyond established technologies like AESA radar and emphasize research and development.
- Addressing the requirement for multi-role fighter aircraft through the procurement of new F-16s.
- Gaining superior maneuverability and firing capabilities at high altitudes with the purchase of EUROFIGHTERs, and being able to suppress aircraft such as Rafael.
- If an agreement can be reached, include the F-35 fighter jets, for which payment has already been made, in the inventory to gain qualitative superiority.

9 For details, visit https://www.tusas.com/urunler/ucak, accessed on 22 Temmuz 2025.

10 Haber Aero, "TUSAŞ Genel Müdürü Demiroğlu: KAAN ile 6'ncı nesil birlikte gelişiyor", 7 July 2025, https://haber.aero/ozel-roportajlar/kaan-6nci-nesil-ucak-demiroglu-tusas/, accessed on 22 July 2025.

- Thus, addressing the urgent combat need in the short term,
- Capping the momentum built with Hürkuş and Hürjet by focusing on KAAN, while ensuring the long-term procurement of domestic fighter jets.
- Making the Hürjet a long-term alternative to the F-16s,
- Procure and integrate stealth, long-range, high-altitude, extended airborne duration, and AI-supported strategic UAV systems into fighter jets (ANKA-3).